

B1
cont.

is composed of a pair of stator sub-assemblies integrally attached to each other in a back to back manner, each stator sub-assembly having a plurality of pole teeth formed at its inner circumference and housing a coil inside thereof, and a rotor unit is rotatably disposed with a small gap from the plurality of pole teeth and has multiple magnetic poles formed on a circumference thereof, the multiple magnetic poles of the rotator unit being formed by magnetizing the rotator unit alternately with an S pole and an N pole in a circumferential direction, wherein while a magnetic pole width consisting of the S pole and the width of the N pole in each pair are different from each other by a constant electrical angle ranging from 15 degrees to 50 degrees.

{ Please place claim 3 in independent form as follows: }

3. (Twice Amended) A stepping motor comprising:

a stator unit comprising a pair of stator sub-assemblies integrally attached to each other in a back to back manner, each of the stator sub-assemblies including:

5 a plurality of pole teeth formed at an inner circumference of the sub-assembly and housing a coil inside thereof;

10 a rotor unit rotatably disposed with a small gap from the plurality of pole teeth and has multiple magnetic poles formed on a circumference thereof, the multiple magnetic poles being formed by magnetizing the rotor unit alternately with an S pole and an N pole in a circumferential direction wherein one pair

15

B' *cancel'd.*

of the S pole and the N pole in which the width of the S pole is set to be smaller than the width of the N pole and another pair of the S pole and the N pole in which the width of the S pole is set to be larger than the width of the N pole are alternately arranged.

[Please place claim 4 in independent form as follows:]

4. (Amended) A stepping motor comprising:

a stator unit comprising a pair of stator sub-assemblies integrally attached to each other in a back to back manner, each of the stator sub-assemblies including:

5

a plurality of pole teeth formed at an inner circumference of the sub-assembly and housing a coil inside thereof;

10

a rotor unit rotatably disposed with a small gap from the plurality of pole teeth and has multiple magnetic poles formed on a circumference thereof, the multiple magnetic poles being formed by magnetizing the rotor unit alternately with an S pole and an N pole in a circumferential direction wherein one pair of the S pole and the N pole in which the width of the S pole is set to be smaller than the width of the N pole and another pair of the S pole and the N pole in which the width of the N pole are alternately

15

arranged.